

## METHODS AND APPARATUSES FOR SIGNAL LINE TERMINATION

[0001] This application is a continuation-in-part (CIP) application of a co-pending U.S. Patent Application Serial Number 09/752,508, filed December 27, 2000, <sup>PAT 6,661,355</sup> entitled "Method and Apparatus for Constant-Weight Encoding & Decoding".

### FIELD OF THE TECHNOLOGY

[0002] The present invention relates to the field of information transmission systems. More particularly, in one implementation, the present invention relates to constant-weight encoding and decoding of data words on a parallel data line bus.

### BACKGROUND

[0003] It is often desirable, in information transmission systems, to transform information into alternate forms. In one instance, a desirable form might be to encode data, to achieve a constant weight code, where each data word contained a constant number of data elements in each logic state. The data words could be binary words occupying two logic states, those of zero and one. This transformation enables the higher supply potential,  $V_{dd}$ , and the lower supply potential,  $V_{ss}$ , to maintain constant current to the circuits that drive the signal lines and or constant current in the termination circuit,  $V_{term}$ . In another instance it may be desirable to spread information from a data word into sub-words and the weight of the sub-words, where the weight of the sub-word is defined to be the number of data elements in each logic state. In a binary system the weight is the number of ones or zeros in a data word. In another instance it may be desirable to minimize the weight